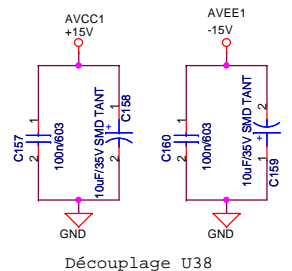
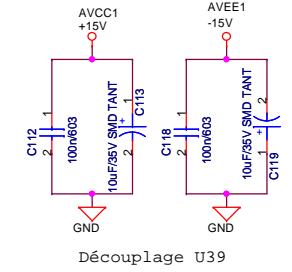


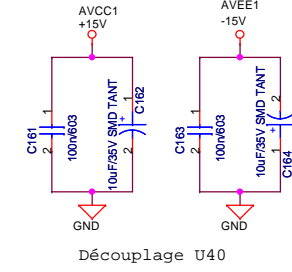
Découplage U37



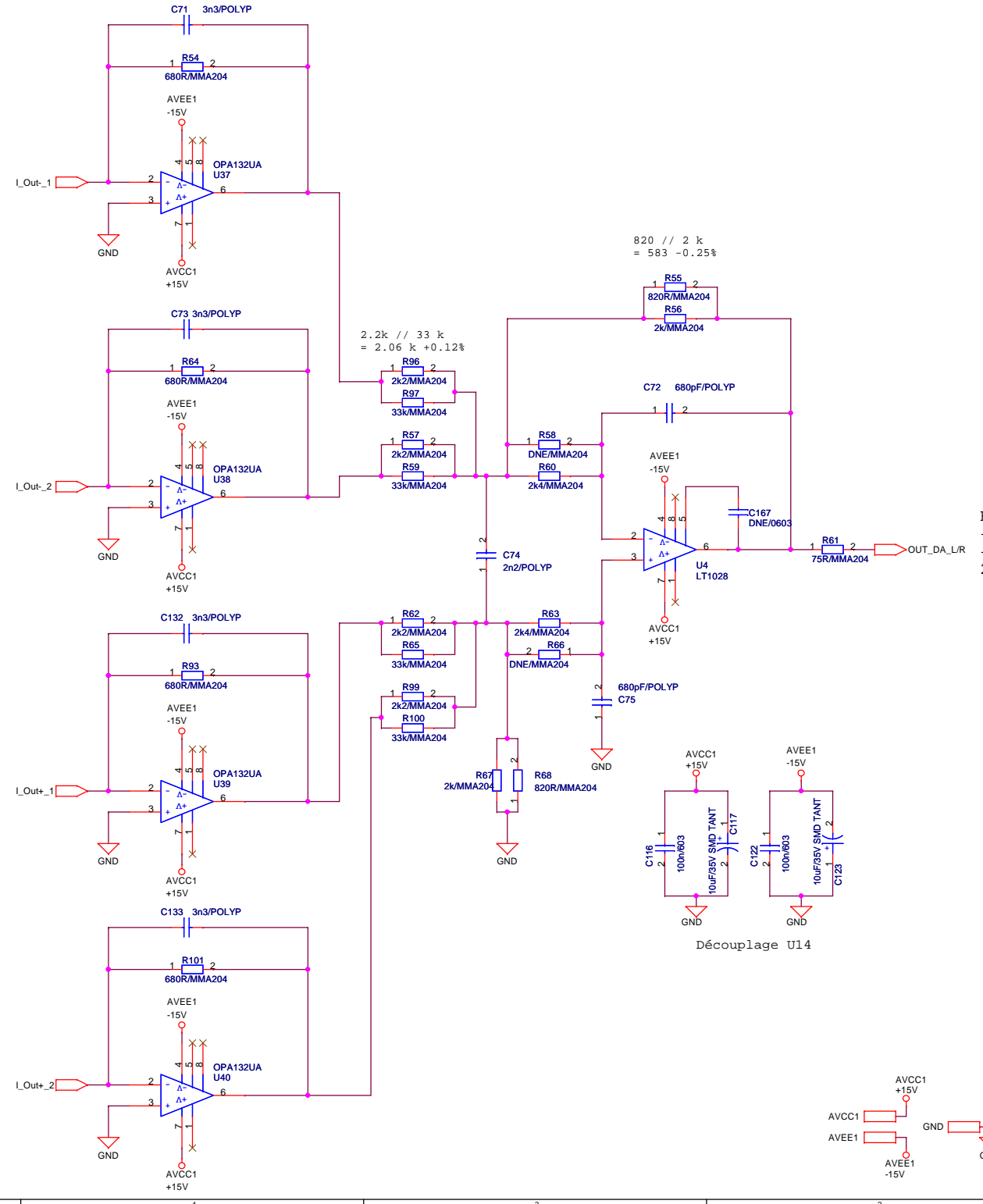
Découplage U38



Découplage U39



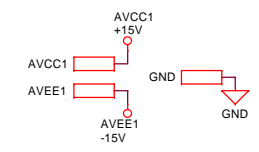
Découplage U40



820 // 2 k
= 583 -0.25%

2.2k // 33 k
= 2.06 k +0.12%

Filtre Bessel ordre 3 53.5kHz
-0.38dB @20kHz
-1.6dB @40kHz
2.115Vrms @0dBFS



Découplage U14

		Project TELOS 600	Drawing by Jean-Loup Afresne Digital Audio S.A.
Title ANALOG FILTER			
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```

0    0    0 : Input and Output Slave
0    0    1 : Output master avec RCKI=128Fs
0    1    0 : Output master avec RCKI=512Fs
0    1    1 : Output master avec RCKI=256Fs

```

```

0      0      : 24 Bits
0      1      : 20 Bits
1      0      : 18 Bits
1      1      : 16 Bits

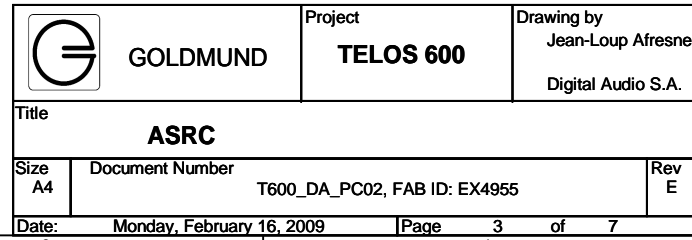
```

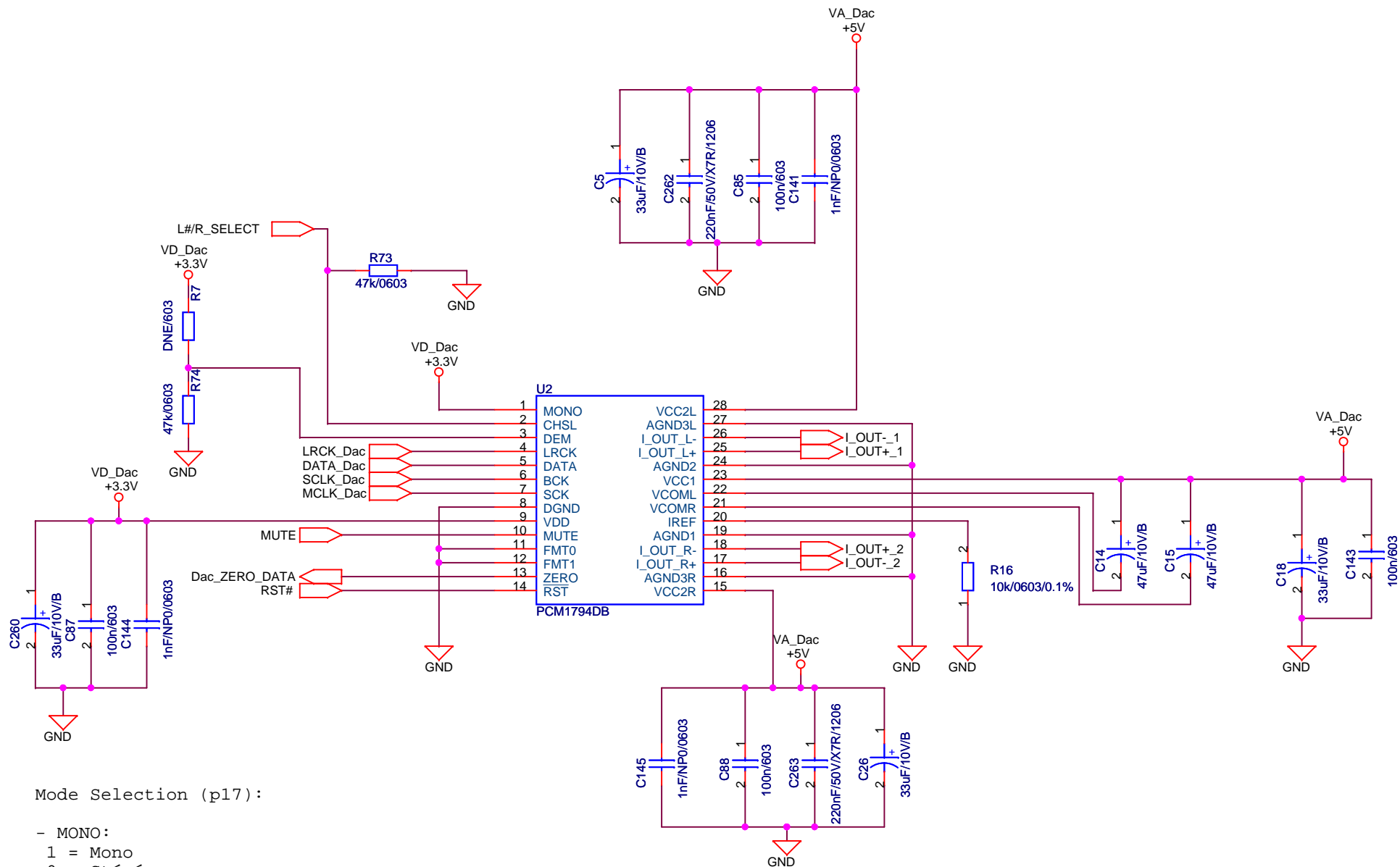
- $512 \cdot F_S$: 48 kHz
- $256 \cdot F_S$: 96 kHz
- $128 \cdot F_S$: 192 kHz

- 512*Fs : 96 kHz
- 256*Fs : 192 kHz

```
-TDMI disabled
```

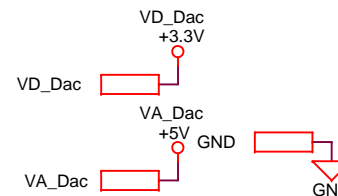
- TDMI Disabled




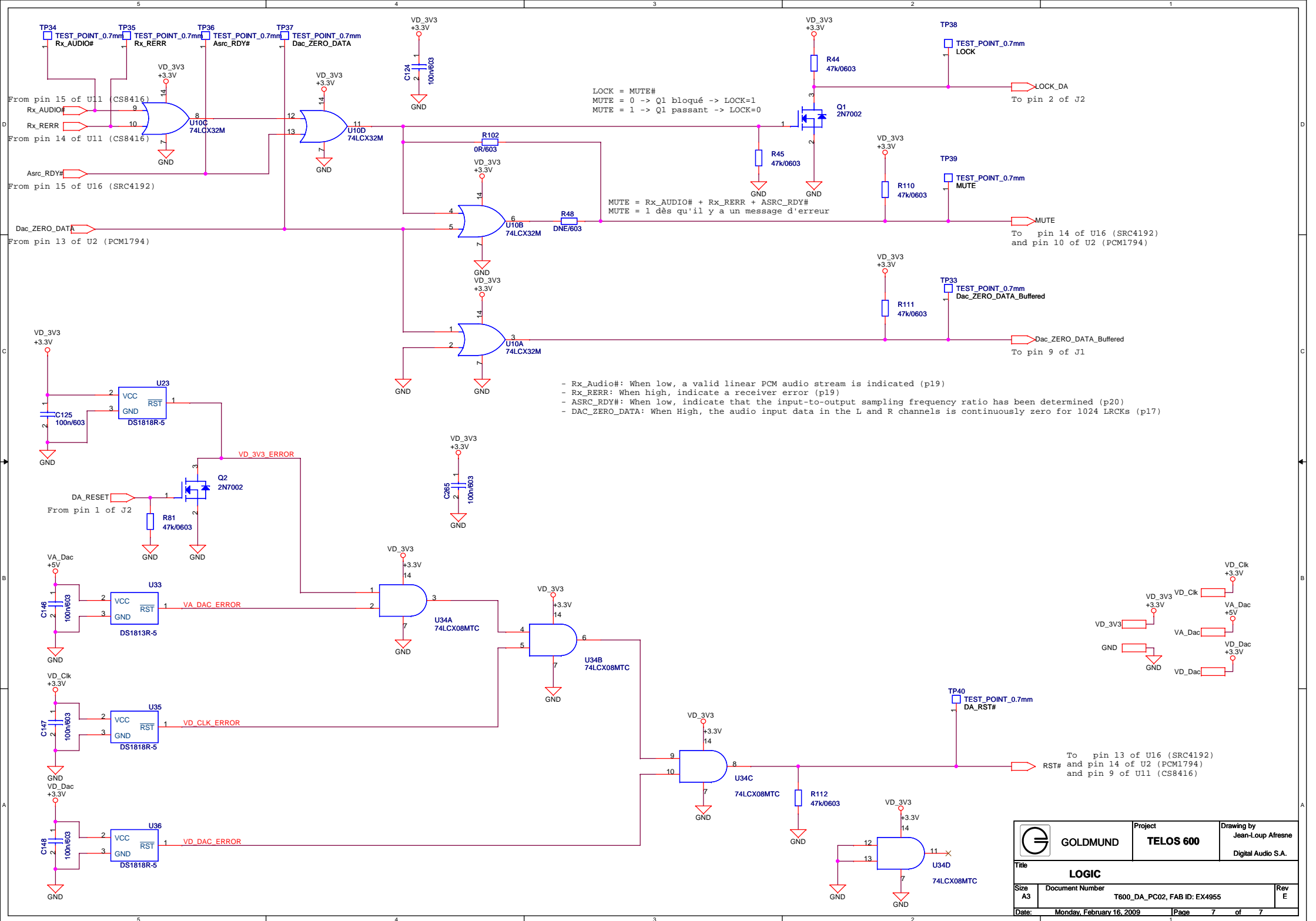


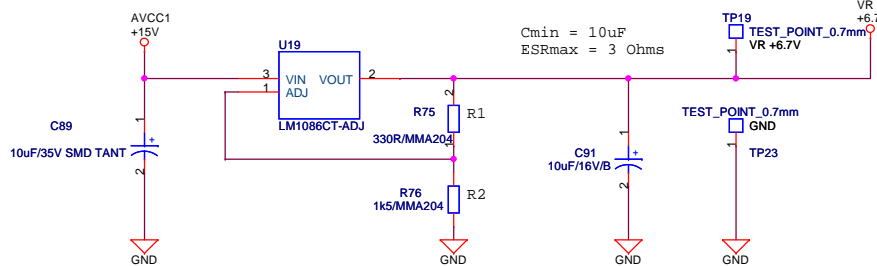
Mode Selection (p17):

- MONO:
 - 1 = Mono
 - 0 = Stéréo
- CHSL:
 - 1 = Right
 - 0 = Left
- MUTE:
 - 1 = Bipolar zero
 - 0 = Signal
- FMT0 = FMT1 = GND: i2s audio data format



 GOLDMUND		Project TELOS 600	Drawing by Jean-Loup Afresne Digital Audio S.A.
Title DAC			
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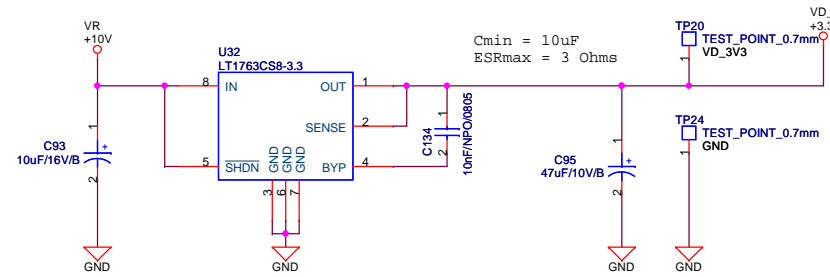




TENSION DE SORTIE:
 $V_{out} = 1.21 * (1 + R2/R1) + I_{adj} * R2$
 $V_{out} = 6.7V$ avec $R2=1.5\text{ kOhms}$, $R1=330\text{ Ohms}$, et $I_{adj}=120\mu A$
 $I(R1) = 1.21/R1$
 $I(R1) = 3.67mA$ avec $R1=330\text{ Ohms}$ $P < 5mW$
 $I(R2) = I(R1) + I_{adj}$
 $I(R2) = 3.68mA$ avec $R2=330\text{ Ohms}$ $P < 32.5mW$

PUISSANCE DISSIPÉE:
 $P = I_{out} * (V_{in} - V_{out}) + I_{gnd} * V_{in}$
 Pour $I_{out}=0.3A$ $I_{gnd}=10mA$
 $P = 0.3 * (15 - 6.7) + 0.01 * 15 = 2.64W$

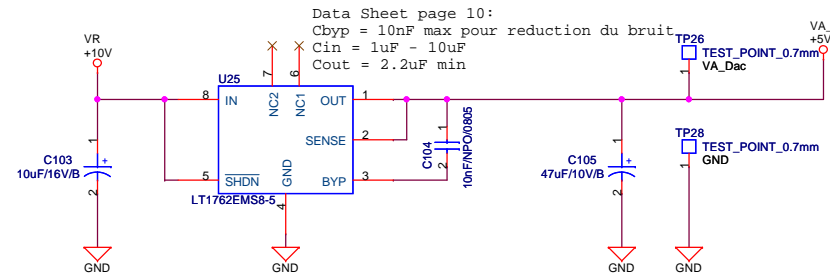
TEMPERATURE AVEC RADIATEUR:
 $T_j = P * (T_{jc} + T_{ca})$
 $T_{jc} = 4^\circ C/W$ et $T_{ca} = 20^\circ C/W$
 $T_j = 2.64 * (20 + 4) = 66^\circ C$
 $T_{a_max} = T_{j_max} - T_j$
 $T_{a_max} = 125 - 66$
 $T_{a_max} = 59^\circ C$



ALimentation:
3.3V
 -VL_ASRC: 7.8mA Typ
 -VD_ASRC: 66mA Typ
 -VL_Rx: 2mA Typ
 -VD_Rx: 23mA Typ
 -VA_Rx: 9.4mA Typ
Total = 110mA

PUISSANCE DISSIPÉE:
 $P = I_{out} * (V_{in} - V_{out}) + I_{gnd} * V_{in}$
 Pour $I_{out}=200mA$ $I_{gnd}=5mA$ (p8)
 $P = 0.2 * (6.7 - 3.3) + 0.005 * 6.7 = 0.72W$

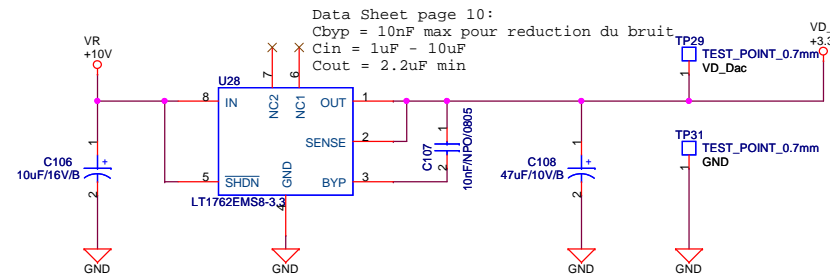
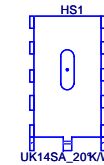
TEMPERATURE SANS RADIATEUR:
 $T_j = P * T_{ja}$
 $60^\circ C < T_{ja} < 86^\circ C$ / $70^\circ C$ Typique (p15)
 $T_j = 0.72 * 86 = 62^\circ C$
 $T_{a_max} = T_{j_max} - T_j$
 $T_{a_max} = 125 - 62$
 $T_{a_max} = 63^\circ C$



IA_Dac = 37mA Typ @192kHz AND bpz DATA

PUISSANCE DISSIPÉE:
 $P = I_{out} * (V_{in} - V_{out}) + I_{gnd} * V_{in}$
 Pour $I_{out}=40mA$ $I_{gnd}=2.2mA$ (p6)
 $P = 0.04 * (6.7 - 5) + 0.0022 * 6.7 = 0.083W$

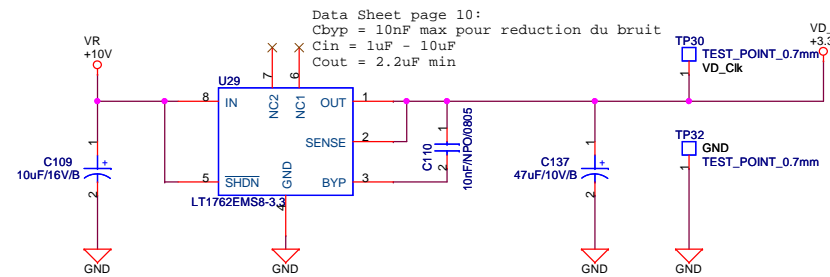
TEMPERATURE SANS RADIATEUR:
 $T_j = P * T_{ja}$
 $110^\circ C < T_{ja} < 140^\circ C$ / $125^\circ C$ Typique
 $T_j = 0.083 * 140 = 11.63^\circ C$
 $T_{a_max} = 125 - 23.2$
 $T_{a_max} = 133.4^\circ C$



ID_Dac = 45mA Typ @192kHz AND bpz DATA

PUISSANCE DISSIPÉE:
 $P = I_{out} * (V_{in} - V_{out}) + I_{gnd} * V_{in}$
 Pour $I_{out}=50mA$ $I_{gnd}=2.2mA$ (p6)
 $P = 0.05 * (6.7 - 3.3) + 0.0022 * 6.7 = 0.185W$

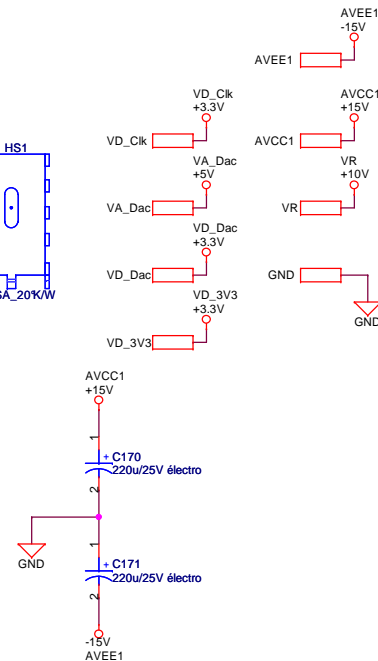
TEMPERATURE SANS RADIATEUR:
 $T_j = P * T_{ja}$
 $110^\circ C < T_{ja} < 140^\circ C$ / $125^\circ C$ Typique
 $T_j = 0.185 * 125 = 23.2^\circ C$
 $T_{a_max} = T_{j_max} - T_j$
 $T_{a_max} = 125 - 23.2$
 $T_{a_max} = 101.8^\circ C$



ID_XO = 25mA Max ID_Buffer = 35mA Max @ 49.152MHz"

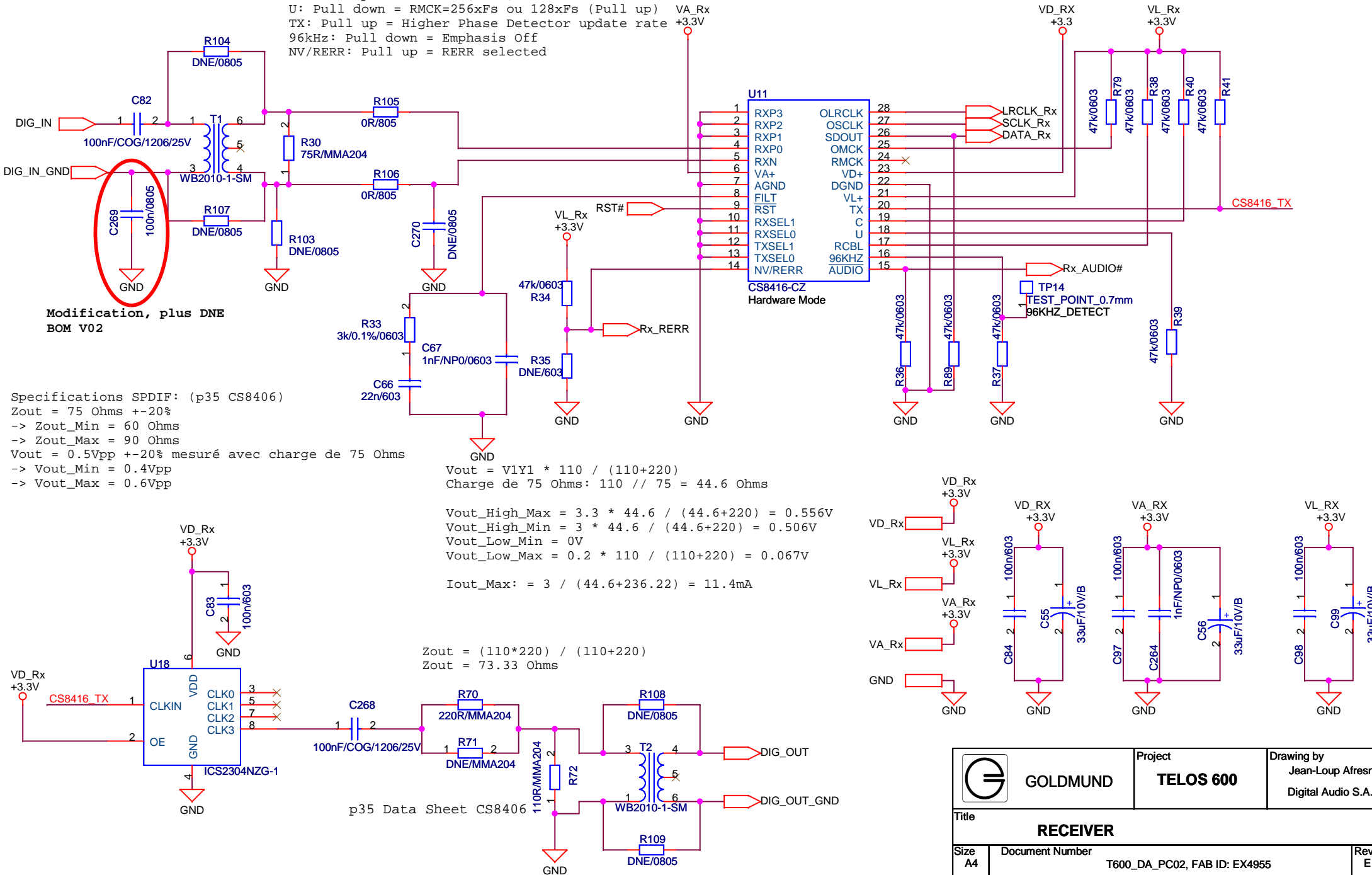
PUISSANCE DISSIPÉE:
 $P = I_{out} * (V_{in} - V_{out}) + I_{gnd} * V_{in}$
 Pour $I_{out}=60mA$ $I_{gnd}=2.2mA$ (p6)
 $P = 0.06 * (6.7 - 3.3) + 0.0022 * 6.7 = 0.22W$

TEMPERATURE SANS RADIATEUR:
 $T_j = P * T_{ja}$
 $110^\circ C < T_{ja} < 140^\circ C$ / $125^\circ C$ Typique
 $T_j = 0.22 * 140 = 31^\circ C$
 $T_{a_max} = T_{j_max} - T_j$
 $T_{a_max} = 125 - 31$
 $T_{a_max} = 94^\circ C$



	Project TELOS 600	Drawing by Jean-Loup Afresne Digital Audio S.A.
Title POWER SUPPLY (+5V, +3V3)		
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START-UP PIN CONDITIONS(p44):
SDOUT: Pull down = Hardware mode
RCBL: Pull up = Serial Port Master Mode
Audio: Pull down = SFSEL1=0 (RXP0)
C: Pull up = SFSEL0=1 (RXP0)
U: Pull down = RMCK=256xFs ou 128xFs (Pull up)
TX: Pull up = Higher Phase Detector update rate
96kHz: Pull down = Emphasis Off
NV/RERR: Pull up = RERR selected



	GOLDMUND		Project TELOS 600	Drawing by Jean-Loup Afresne Digital Audio S.A.
	RECEIVER			
Size A4	Document Number T600_DA_PC02, FAB ID: EX4955			Rev E
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